

## THE IMPACT OF EGO-INVOLVEMENT IN THE CREATION OF FALSE CHILDHOOD MEMORIES<sup>1</sup>

***Iris Žeželj<sup>2</sup>, Sofija Pajić, Neda Omanović, Jasmina Ninković and  
Julija Grčić***

Department of Psychology, University of Belgrade, Serbia

*An experiment employed a "familiar-informant false-narrative procedure" to examine the effects of ego involvement manipulation on the creation of false memories for suggested events. Our main sample consisted of 54 Serbian adolescent students. During the pre-testing stage, students' parents (N=54) provided details from their children childhoods, which were used to create stimuli for the subsequent stages. Half of the participants were given an ego-involving suggestion- a short written statement that claimed that people with higher intelligence have a better and more detailed memory of their childhood. We hypothesized that ego-involved group would recollect more childhood events in general, create more false memories and be more confident in its' authenticity and clarity. Implanted event was recognized as autobiographic by 24% respondents in the testing stage and by 44.4% respondents in the retesting stage. There were significant qualitative differences between authentic and false memories: authentic memories were assessed as more reliable and clearer than the false ones. Ego-involvement manipulation had no impact on the frequency or quality of false memories reported by the participants. Even though the specific ego-involvement manipulation was not successful, our findings suggest that other motivating strategies we employed pushed the respondents into accepting false memory suggestion in the retesting stage. Future research could benefit from testing more elaborate ego-involving procedures.*

**Key words:** *memory and motivation, false memory, ego- involvement, suggestibility*

---

<sup>1</sup> This research is a result of work on a project "Psychological issues in the context of social changes", funded by Ministry of Science and Technological Development of Republic of Serbia (project # 149018 D).

<sup>2</sup> ✉: [lavi@sezampro.yu](mailto:lavi@sezampro.yu)

Events are rarely remembered with complete accuracy relative to the way they occurred. Rather, they are reconstructed, (Bartlett, 1932) and that process is susceptible to a number of different character traits of the person remembering, the circumstances under which the event took place, and the situation during which remembering occurs. Vast amount of research confirms that expectations, convictions, attitudes, prejudice and stereotypes have great impact on an individual's memory and remembering (Baddeley, 1999; Kunda, 1999). In addition to the previously listed factors, memory can also be affected by the meaning of the event that took place, the event's emotional hue, as well as the mood of the individual while partaking in the event and remembering it. Likewise, human memory is susceptible to suggestion; if one believes that another individual is well informed about the event one is trying to remember, one has a propensity to change his memory in accordance with the newly acquired information. This has been clearly demonstrated in practice when psychotherapists successfully used the power of suggestion on their clients to create false memories of childhood abuse (Loftus & Bernstein, 2005). It has also been shown in criminal court, when witnesses modified their statements according to the way they were questioned (Zaragoza & Mitchell, 1996). Experimental procedures that emulate these and similar events, confirmed the inconsistency of human memory under the power of suggestion. These findings lead to defining the phenomenon of false memory.

False memories are memories of events that never took place. Instead, these memories are partly or fully implemented during the research itself. As a tool to construct false memories, researchers use details from events that did take place, which result in the client's fabrication of the overall event. These false memories can also be constructed using details of the events that are fabricated and never took place in the client's past (Loftus, 1997a, 1997b, 1999, 2004; Loftus & Pickrell, 1995).

One branch of the false memory research relied on words and sentences as simple stimuli for the creation of false memories. We see results of such experiments in the works of Bransford and Franks (1971) as well as Roediger and McDermott (1995), in which they demonstrated that respondents declared they remembered words and sentences that in fact were not presented to them by researchers. Recent research (Watson, McDermott, & Ballota, 2004; Howe, 2005) reported that false recall in episodic memory can be controlled, but that this inhibition ability varied across age groups: forewarning about false recall eliminated it in younger respondents, whereas it had little or no effect among older ones.

In order to test autobiographic memories, researchers created more complex procedures, the most famous one being the so called "familiar-informant false-narrative procedure". In this procedure, respondents are asked to remember events from their childhood, while researchers have members of the respondent's family or friends describe an event and insert a false fact with the intention of creating a false memory. This procedure has been developed and modified by Elisabeth Loftus and her coworkers in series of studies. In one of their initial trials (Loftus & Pickrell, 1995), researchers attempted to insert a false memory of their respondents getting

lost in a mall when they were approximately 5 years old. In the first stage of the research, participants were asked to try to remember four events from their childhood. Information about these events was also collected from the participant's family and friends. Based on gathered information, researchers prepared a booklet for each participant that contained descriptions of the three events that really took place and the one that was falsely created. The falsely created event was based on testimony given by the respondent's family members, in which they recalled a possible trip to a mall when the respondent was approximately 5 years of age, but also confirmed that the respondent never got lost. The key elements of the falsely created event were: the respondent got lost in a mall for a long period of time, he cried, an older unfamiliar woman consoled him, and finally, he was returned to his family. The booklet creation was succeeded by two interviews, one to two weeks apart, with the respondents. Participants were told that the researchers were interested in testing how much their memories coincide with those of their family members. At that time, participants were read a few key elements from the statements given by their family members, which were supposed to help them remember the given events. After reading the booklet, participants remembered 68% of the events that actually took place and this percentage stayed the same after the two succeeding interviews. The false event was recalled by 29% of respondents after reading the booklet, and this percentage dropped to 25% after the two succeeding interviews.

Further investigation of assurance in authenticity of implanted events discovered that there were two types of this phenomenon, labeled as "misrepresentation" and "rich false memories". In the case of misrepresentation, respondents accept or assume that the false event really took place, whereas in the case of rich false memories, respondents honestly believe that the false event actually took place. Rich false memories are defined as "the subjective feeling that one is experiencing a genuine recollection, replete with sensory details, and even expressed with confidence and emotion, even though the event never happened" (Loftus & Bernstein, 2005, p. 101). The qualitative differences between false and real events were also revealed: false memories were less detail rich, the respondents used fewer words to describe them and the descriptions were less clear, and the respondents were not as convinced in the authenticity of those events (Hyman & Loftus, 1998; Loftus, 2004).

It was also shown that proneness to false memory implantation differed among participants. Individuals that were more susceptible to suggestion and had a more active imagination had an easier time forming false memories (Hyman & Loftus, 1998).

Hyman and Kleinknecht (1999) suggested that accepting of false memory suggestion depends on three groups of factors.

1. *Plausibility judgment*: the more probable the false memory event, the higher the probability of the acceptance of false memory suggestions. Besides general plausibility, it is also important that the false event is plausible in comparison to individual's experience, i.e. the probability of that event actually happening to

that particular individual. Plausibility depends on source of suggestion: more authentic source of suggestion makes the event's plausibility higher. Moreover, there are evidence (Mazzoni, Loftus & Kirsh, 2001) that the perceived plausibility of an event can be enhanced by suggestive influence (e.g. reading accounts of the occurrence of events).

2. *Image and narrative construction*: making the respondent connect the falsely created event to his self-knowledge or encouraging the respondent to describe a mental image of the false event, leads to constructing a mental image and the story behind it. In research done by Loftus (2004), participants were given an instruction to create a mental image of a false event. Results showed that the process of imagining made the fabricated event more familiar to the respondent and that familiarity was, wrongfully so, often attributed to remembering the false event instead of treating it as a direct consequence of imagining.
3. *Source monitoring judgments* is the key process in the creation of false memories. This process represents the participant's tendency to attribute experimentally conceived memory, in the following step of the experiment, to their actual memory. This kind of error is often impacted by a specific demand from the person questioning the participant. This means that the researcher leads the participant in remembering the previously created mental image of the false event and the time that passes from the initial false suggestion during which the source of the suggestion is lost, but the context and the meaning preserved (Zaragoza & Mitchell, 1996; Oakes & Hyman, 2000).

As we have indicated, research has shown that false memory phenomenon can be both inhibited or prompted by manipulating either situational factors (e.g. instruction, event's plausibility) or personal factors (e.g. age or character traits of respondents). It is also well established fact that individual motivation can distort both perception and recollection of events. People often have selective memory to protect their own ego (i.e. individuals remember events that paint a positive picture of their characters, and forget those that don't). The motive to maintain and elevate the positivity of one's self concept has been labeled differently and studied for the past 100 years. In motivated cognition studies, Seidikes & Strube (1997) propose the phrase "motivated self enhancement". In their recent study, Gramzow and Willard (2006) stated that this motive is biasing perception of present performances, but not recollection of past performances. In modern attitude theories (Levin, Nichols & Johnson, 2000; Chaiken & Eagly, 1993; Eagly, 2007) this motive is labeled "ego-involvement" and defined as a tendency to preserve a positive impression of one self. Given our hypothesis that motivated self enhancement strivings can contribute to memory recollection, we predicted that the manipulation of ego-involvement would increase the respondents' motivation to score high on recollection task, and, thus, probability of creating false memories. We wanted to test if the respondents lead to believe that people with higher intelligence could remember more events from their childhood, often constructed more false memories and perceived them as more clear and reliable. This procedure was supposed to motivate the respondents to create more false memories relying on the fact that they would try to preserve the

positive image of themselves running under the assumption that higher intelligence is a socially desirable characteristic.

We also attempted to heighten the probability of the occurrence of false memory phenomenon using additional experimental techniques, which will be further elaborated in detail.

Our research had five basic assumptions: relying on Loftus's results (Loftus, 1995; 1997) we expected false memories to be created in approximately one quarter of participants (that percentage is usually between 25 and 30%); next we expected to see no difference in the number of participants who successfully created false memories between the testing and the retesting stage of the experiment (previous research report no change, or even decrease). We also assumed that the real and the false memories would be significantly different in quality (the false memories would be less convincing, containing less details in comparison to the real memories) (Hyman & Loftus, 1998). At last, we hypothesized that convincing participants that more intelligent individuals have a better memory of their childhood would motivate the participants to construct false memories. Manipulating ego-involvement by exposing the participants to the fact that more intelligent people remember their childhood more accurately, should result in a higher percentage of false memory creation as well as in a more convincing and clear construction of those events.

## **METHOD**

### **Participants**

The sample consisted of two groups: the main participants and their parents. All three stages were conducted with participants from Belgrade, Serbia. The first phase of research involved 76 parents, out of which 22 had to be excluded due to a lack of information, so the final number of parent participants was 54. Second phase involved 54 high school students from three Belgrade public high schools, aged 17-19 (average age 17.5). In the third phase, the same participants were retested.

### **Procedure**

The research procedure was divided into three consecutive stages:

#### *Collecting information from the parents*

The first stage of the research involved the parents who were given a questionnaire to fill out. The first portion of the questionnaire consisted of open

questions about events that had happened to the parents' child between 3 and 6 years of age. This questionnaire involved events such as the child's most memorable birthday, a picnic or other trips that took place, weddings attended, a trip to circus or a theater, a trip to Zoo, receiving a gift from Santa Clause, etc. Parents were given instructions to provide the time a particular event took place, the names of the participants, the location of the event, and any other interesting details they could remember relating to an event, all written in five or six sentences. Using the information collected from these questionnaires, we constructed descriptions of these events, and these descriptions were used in the second stage of the experiment. The second part of the questionnaire consisted of closed type questions (Yes/No questions) that focused on potentially interesting details of particular events. We assumed these events did not happen to most of the participants. Some such questions were: "Did your child get licked by a camel in a Zoo?" "Did your child spill a glass of red wine on one of the guests at a wedding?", "Did your child and his friends have a cake fight at one of his birthdays?", "Did your child fall from a tree during a picnic?", "Did an actor directly address him at a theater?", "Did your child pull Santa's beard while sitting on his lap?", etc. Using these questions, we collected all the information about the events that *did not* take place in their child's experience and one of these events was selected as a critical event, or an event used in the creation of a false memory. Parents were told that the purpose of the research was to compare their memory of certain events with their children's memories of those same events. Parents were also asked not to discuss any research related events with their children until the completion of the experiment. They were then debriefed and thanked.

#### *Participants' Exposure to Real and False Autobiographical Memories*

Students were questioned individually in a room at their school designated for this purpose. At the beginning of each questioning, students were given oral instructions, which were different for the experimental and control groups. The experimental group was given a motivational suggestion, but the control group was not. This motivational suggestion was as follows: "*the previous research has shown that the more intelligent people are, the more detailed their childhood memories are i.e. People with a higher IQ can list more details related to a particular memory and their memories are more clear.*" The participants were not told the true purpose of the research, instead they were told the same thing as their parents, which is that the purpose of the research is the comparison of their memories of a particular event with those of their parents. Then, the respondent read the event descriptions, one by one, and orally answered questions pertaining to that particular event.

#### *Retesting*

The third stage of the research was done two weeks after the second stage. All respondents who participated in the second phase of the research were retested in

third stage. They were tested in groups of 10-15, at the end of the school day. The respondents were given a questionnaire in which all three events, two real and one false, were divided into two segments. The second segment of the second event was falsely created in its entirety. This kind of story division was decided upon so that we could collect "clean" data about the false event and its' characteristics, which could not have been done if the event had been presented in total (true information along with the false ones). After every segment of the story they were given the same multiple choice questions as in the second phase of the research.

## **Instruments**

The questionnaire consisted of short descriptions of three stories, out of which the first and third descriptions were related to the events that really took place, and the second one related to an event that really took place but also contained a false segment of that event. All three stories were similar in form and construction and were based on the information collected in the first phase of the research. The falsely inserted segment was similarly formatted and presented to all respondents, and, for most of them, it was related to a birthday party occurrence and stated: "*at one moment you started throwing cake at each other and you found that very amusing.*" Underneath each one of the written stories were three self-evaluation multiple-choice questions. The first was a "yes / no" question pertaining to the existence of the memory itself. The second question related to the respondent's confidence that the given event really took place, and the offered answers were: A: I think this event took place, B: I'm partially confident this event took place, C: I'm very confident this event took place and D: I'm absolutely confident this event took place. The third question related to the degree of clarity with which the respondent "remembers" the details of the event, and the answers offered were: A: I vaguely remember this event, B: I can relatively recall the details of the event, C: I can clearly remember the details of this event and D: I can remember all the details as if the event took place yesterday.

Along with the questionnaire, the respondents participated in a semi-structured interview in which they were asked to say if they remember every childhood memory whose descriptions they previously read. They were also asked to give as many details about the given event as they could remember and answer the questions: "When did the event take place?", "Who were the participants?", "Where did the event take place?" If the respondents were not able to remember a given event, they were asked to imagine it. Researcher than told them: "If you can't remember some event, try to imagine it, because that can help you recall the actual event".

## RESULTS

First, we will present the frequency of created false memories and address the problem of implementing the false memory procedure in a Serbian cultural setting. Then, we will reveal the characteristics of created false memories, and, finally, we will show the results pertaining to the effect that the motivational suggestions had on the creation of these false memories.

### Experimental procedure and the occurrence of false memory

Whereas around 90% of the questioned participants claimed to have remembered the real autobiographical events (first and third event in the questionnaire), the number of those who claimed to have remembered the second event, which was specific for containing the false segment, was significantly smaller (Table 1). Remembering the false segment contained in the second event is depicted separately because a large number of participants declared they remembered the real segments of the second event, but not the false one. In this phase of the experiment, 24.1% of the participants from both groups, claimed to have remembered the false segment of the second event, (i.e. they created a false memory).

*Table 1: The occurrence of remembering of the events or segments of the events*

	First event		Second event		Third event	
<b>Testing</b>			<i>Authentic segment</i>	<i>False segment</i>		
	50 (92.6%)		37 (68.5%)	13 (24.1%)	47 (87%)	
<b>Retesting</b>	<i>First segment</i>	<i>Second segment</i>	<i>Authentic segment</i>	<i>False segment</i>	<i>First segment</i>	<i>Second segment</i>
	52 (96.3%)	52 (96.3%)	47 (87%)	24 (44.4%)	51 (94.4%)	52 (96.3%)

In the third phase of the research the participants were again exposed to the same events, but this time divided into two distinct segments that contained only important details of the events. The tendency of respondents to remember the events they were previously exposed to was noticeably higher. In this phase of the research, as well as the previous one, the number of respondents who claimed to have remembered the second event (the one containing the false segment) was lower than the number of those remembering the real segments of the first and third events (Table 1). However, an unexpected increase of respondents remembering the false event and accepting it as an autobiographical memory was noted. In this phase, 44% of the respondents accepted the false event as an autobiographical memory, meaning

that almost 20% of the respondents recognized the false segment as an autobiographical memory only in the third phase.

### Characteristics of the falsely created memory

Though it was not possible to isolate the clarity and confidence of remembering the false segment in the second phase of the research, introduction of this false segment in the second event lead to lower confidence and clarity when remembering the second event compared to the other real events (Table 2). We also noted a general tendency of the participants to question the clarity of their memory rather than its authenticity.

Table 2: Average confidence and clarity of memories of the events

	First event		Second event				Third event					
	Confidence		Clarity		Confidence		Clarity		Confidence		Clarity	
<b>Test</b>	3.24		2.24		2.22		1.65		3.07		2.31	
<b>Retest</b>	First Segment		Second segment		Authentic segment		False segment		First segment		Second segment	
	Con.	Clar	Con	Clar	Con	Clar	Con	Clar	Con	Clar	Con	Clar
	3.46	2.65	3.39	2.76	2.89	2.28	1.15	.91	3.15	2.56	3.19	2.70

In the third phase of the research, the estimated confidence of the respondents' memory of given events remained unchanged, and the estimated clarity was somewhat higher (i.e. the respondents claimed that they very clearly remembered the given events). The difference between the implemented false memory and the authentic memories was that the false memory was assessed as less truthful ( $F(1, 43) = 124.185; p = .000$ ), as well as less clear in comparison to the real memories ( $F(1, 43) = 94.419; p = .000$ ). The average confidence of the respondents in remembering the authentic events was 3.21. They claimed that they were very sure about the truthfulness of those events. The average confidence of the respondents in remembering the false events was 1.15, and they mostly said they only thought this event really took place. Similar results were obtained for the clarity of their memories: the average clarity of memories of real events was 2.59 (the respondents mostly remembered these events very clearly), whilst the average clarity of the memory of false events was 0.91 (the respondents remembered these events vaguely). Still noted is the impact of the false segment on the respondents' memory of the real segment of the second event. The respondents proved to be less confident in the authenticity of the real segment of the second event, than those of the first and third event.

## **The impact of motivational suggestion on the creation of false memory**

The basic assumption of this experiment was that the probability of the creation of the false memory, as well as general autobiographic recollection, would increase in respondents exposed to the ego-involving suggestion. As shown in Table 3, the results gathered did not support this assumption: this experimental manipulation did not make a significant impact on the number of created false memories (chi-square did not reach significance) and had no impact on the more detailed remembrance of the authentic events (see Table 4).

It was also expected that the respondents exposed to motivational suggestion would claim to be more confident in their memories as well as the clarity of them in comparison to the respondents from the control group who were not exposed to this experimental procedure. This hypothesis, however, did not prove to be true as the average confidence and average truthfulness did not differ significantly between groups (F coefficient did not reach significance).

*Table 3: The occurrence of memory of the events or segments of the events in response to the ego-involvement suggestion*

Group	First event	Second event	False segment	Third event
Experimental (ego involved)	24 (88.9%)	17 (63%)	6 (22.2%)	25 (92.6%)
Control	26 (96.3%)	20 (74.1%)	7 (25.9%)	22 (81.5%)

*Table 4: Average confidence and clarity of respondents remembering the events when exposed to the ego-involvement suggestion*

Group	First event		Second event		False segment		Third event	
	Confidence	Clarity	Conf.	Clar	Con.	Clar	Conf.	Clar.
Experimental (ego involved)	2.96	2.37	2.26	1.78	3.22	2.52	2.96	2.37
Control	3.52	2.11	2.19	1.52	2.93	2.11	3.52	2.11

## **DISCUSSION AND CONCLUSIONS**

The focus of this research was testing and clarifying: (a) the phenomenon of false memories, as well as, (b) the possibility of the impact that ego-involvement might have on the occurrence and quality of false memories. Further discussion will address these two main issues.

Our study demonstrated that familiar-informant false-narrative procedure can be successfully employed with non-English speaking respondents in order to create false memories. In the course of experiment, researchers made several methodological decisions which will be discussed here.

First, the event we selected was generally plausible and adequately presented for the respondents from our environment. A "loose" birthday celebration (when a child is 3 to 6 years of age) with extended family and friends, that includes a large birthday cake, is a tradition in our environment, so the creation of a false memory related to this episode was highly possible. If we had decided to use the same event Loftus used in her research (Loftus, 1995; 1997), the figures we would have obtained would have been significantly smaller, because the children at that time (nineties) were rarely visiting large shopping malls. This finding demonstrates that the success in the false memory creation largely depends on the choice of the critical event as well as its accommodation to fit the cultural milieu in which the experiment took place. As for individual plausibility, we noted that the participants that were prone to pranks and told they experienced many unusual childhood events, were also more prone to accepting this particular false event. On the other hand, corresponding to previous research (Hyman & Loftus, 1998), the participants that remembered their childhood events with great detail and confidence were less prone to accepting implanted events.

Second, our procedure contained experimental interventions could have also pushed the participants into believing in the truthfulness of the falsely created event that was later presented to them. Firstly, it came from a reliable source: the respondents' parents (Hyman & Loftus, 1998; Oakes & Hyman, 2000). Besides that, the participants were informed that the previous research suggested that the children remember their childhood events better than their parents.

As it was mentioned, the results originating from Loftus and her coworkers showed that on average 25-30% of participants formed a false memory and this percentage remained stable in the retesting stage (Loftus & Pickrell, 1995; Loftus 1997; 2005). Although we used similar methodology, the number of participants recognizing a false segment as authentic increased from 24.1% in the second phase, to 44.4% in the third phase of the research. We can offer a few potential explanations for this finding. In the retesting stage, respondents were provided with more details about the same events, (coming out of their own description of events) than they were presented within the second stage. Besides that, in this stage all events were divided in segments. Respondents were presented the fake segment within the larger context of true segments, so it is possible that the stronger context effect was achieved. Finally, they were guided through the process of attempting to imagine the events they could not remember after reading the descriptions of those events. Previous research has shown that the process of suggestion, which is used to lead the respondents to imagine any given event, results in confusion of that particular memory source, so the respondents become convinced that whatever they imagined in the previous questioning actually happened (Carry, Manning, Loftus, & Sherman, 1996; Loftus & Bernstein, 2005). Because this was the most substantial

modification of the standard procedure, we believe it had the greatest impact on the unexpected increase in the number of respondents forming false memories in the retesting stage.

This experiment confirmed the results from the previous research, which suggested that real memories and false memories had qualitative differences, i.e. respondents remembered false events with less clarity and conviction in detail than they did real events (Payne, Neuschatz, Lampinen & Jay Lynn, 1997; Hyman & Loftus, 1998). The "poor" quality of false memories was indirectly shown through respondents' statements during the interview when they weren't able to remember any additional detail relating to the false event. This characteristic of false memories is probably a consequence of a lack of a mental image of the false event, and an inability to incorporate that event in existing mental schemas, so respondents' memories of the false event remained faint and unconfirmed.

The motivational suggestion used in this research had no significant impact on general recollection and no significant impact on false memory creation. The ineffectiveness of motivational suggestion could be explained in two ways. First, it can be assumed that no difference was noticed because the respondents were already motivated to their maximum by other procedures applied. Namely, they were asked to come and participate in the research during their high school classes, they found the topic of the research interesting, they were told that children remember their childhood memories better than their parents, which intrigued them, and they were asked to imagine events they could not remember. They found all this stimulating and perhaps lead to their full dedication, which could not have been enhanced by motivational suggestion. Second, it is possible that the applied suggestion was not adequate for the respondents in question, or that it was not executed well enough. There is a possibility that using a motivational tool that better appealed to the characteristics high school students perceive as important when it comes to their self-image, would have had a more effect. An example of such motivational suggestion would be if the respondents were told that sociable and outgoing people remember their childhood events better and are able to provide more details of those events. The execution of the motivational suggestion could be improved by including information that appeals to ego-involvement and make the suggestions more meaningful to respondents by presenting it in an official manner that would stick with them throughout the research experiment. This could be done by including an official spoken and/or written statement that would cite previous findings suggesting a correlation between intelligence and the ability to remember many detailed events. A more elaborated ego-involving statement could be borrowed either from motivated cognition experiments (for review see Kunda, 1990, 1999) or from experiments pertaining to the change of attitudes (see Levin et al., 2000).

## **FINAL REMARKS**

What we perceive as a limitation of familiar-informant false-narrative procedure is its reliance on the parents' memories. In fact, it is fairly probable that the parents were wrong and that the fake episode inserted in the second event actually happened to some of the participants. Researchers tried to overcome this problem by choosing a fake event that wasn't only unlikely, but also almost impossible (Loftus & Bernstein, 2005). We believe that "multiple sourcing"-collecting the stories about the participants' childhood from their parents, as well as relatives, friends, and cousins that witnessed a large portion of participants' lives, would make the stories presented to participants richer in detail and therefore more believable and valid. The process of segmentation of both authentic and fake events, used in the retesting phase of the research, proved to be helpful in isolating a fake autobiographical episode and putting it in the larger context of real episodes, therefore it could be tested more extensively in future experiments.

The fact that in the second part of the interview the researchers failed to ask the respondents to provide details of the events described in the first phase of the research can be viewed as methodological drawback, because it was not possible to compare the quality of memories from both stages. This omission was intentional in order to expedite and economize the research. On the other hand, introducing questions in the interview could potentially hurt the research if the respondents lost the motivation to participate due to the repetition of the same questions and expected answers.

Besides the cultural specificity of our sample and certain procedural novelties, our research included an attempt to examine the impact of ego-involvement on the recognition of real autobiographical episodes as well as the wrong recognition of fabricated details. Even though the specific ego-involvement manipulation was not successful, we believe that other motivating strategies we employed could have pushed the respondents into recognizing the fabricated event in the retesting stage. Future research could benefit from disentangling effects of different techniques for motivating respondents as this could lead to a deeper understanding of the ability to inhibit or boost false memory production. The relationship between motivation and the creation of false memories should undoubtedly be investigated further.

## **REFERENCES**

- Baddeley, A. (1999). *Essentials of human memory*. London: Taylor & Francis.  
Bartlett, F. C. (1932). *Remembering: A study in experimental ting and social psychology*. Cambridge: Cambridge University Press.

- Bransford, J. D., & Franks, J. J., (1971). The abstraction of linguistic ideas. *Cognitive Psychology*, 2, 331-350.
- Carry, M., Manning, C. G., Loftus, E. F., & Sherman, S. J. (1996). Imagination inflation: imagining a childhood event inflates confidence that it occurred. *Psychonomic Bulletin and Review*, 3(2), 208-214.
- Eagly, A. H. (2007). In defense of ourselves: The effects of defensive processing on attitudinal phenomena. In M. Stroebe, J. de Witte, M. Hewstone, K. van den Bos, & H. Schut (Eds.), *The scope of social psychology: Theory and applications* (pp. 65-83). London: Psychology Press.
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Fort Worth, TX: Harcourt Brace Jovanovich.
- Gramzow, R. H., & Willard, G. (2006). Exaggerating current and past performance: Motivated self-enhancement versus reconstructive memory. *Personality and Social Psychology Bulletin*, 32, 1114-1124.
- Howe, M. L. (2005). Children (but not adults) can inhibit false memories. *Psychological Science*, 16, 927-931.
- Hyman, I. E. Jr., & Loftus, E. F. (1998). Errors in autobiographical memory. *Clinical Psychology Review*, 18(8), 933-947.
- Hyman, I. E., Jr., & Kleinknecht, E. (1999). False childhood memories: Research, theory, and applications. In L. M. Williams & V. L. Banyard (Eds.), *Trauma and memory* (pp. 175-188). Thousand Oaks, CA: Sage.
- Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin*, 108, 480-498.
- Kunda, Z. (1999). *Social Cognition: Making Sense of People*. Boston: MIT Press.
- Levin, K. D., Nichols, D. R., & Johnson, B. T. (2000). Involvement and persuasion: Attitude functions for the motivated processor. In G. R. Maio & J. M. Olson (Eds.), *Why we evaluate: Functions of Attitudes* (pp. 163-194). Mahwah, NJ: Erlbaum.
- Loftus, E. F. (1997a). Memories of the past that never was. *Current Directions in Psychological Science*, 6(3), 60-65.
- Loftus, E. F. (1997b). Creating false memories. *Scientific American*, 277, 70-75.
- Loftus, E. F. (1999). Lost in Mall-Misrepresentations and Misunderstandings. *Ethics and behavior*, 9(1), 51-60.
- Loftus, E. F. (2004). Memories of things unseen. *Current directions in psychological science*, 13(4), 145-147.
- Loftus, E. F., & Bernstein, D. M. (2005). Rich False Memories: The Royal Rode to Success. In A. F. Healy (Ed.), *Experimental Cognitive Psychology and its Applications* (pp. 101-113). Washington DC: American Psychological Association.
- Loftus, E. F., & Pickrell, J. E. (1995). The formation of false memories. *Psychiatric Annals*, 25, 720-725.
- Mazzoni, G. A. L., Loftus, E. F., & Kirsch, I. (2001). Changing beliefs about implausible autobiographical events: A little plausibility goes a long way. *Journal of Experimental Psychology: Applied*, 7(1), 51-59.

- Oakes, M. A., & Hyman, I. E., Jr. (2000). The changing face of memory and self. In D. F. Bjorklund (Ed.), *Research and theory in false-memory creation in children and adults* (pp 45-67). Mahwah, NJ: Erlbaum.
- Payne, D. G., Neuschatz, J. S., Lampinen J. M., & Jay Lynn, S. (1997). Compelling memory illusions: The qualitative characteristic of false memories, *Current directions in psychological science*, 6, 56-60.
- Roediger, H. L. III., & McDermott, K. B. (1995). Creating false memories: Remembering words not presented in lists. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 21, 803-814.
- Sedikides, C., & Strube, M. J. (1997). Self-evaluation: To thine own self be good, to thine own self be sure, to thine own self be true, and thine own self be better. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 29, pp. 209-269). New York: Academic Press.
- Watson, J. M., McDermott, K. B., & Balota, D. A. (2004). Attempting to avoid false memories in the Deese/ Roediger-McDermott paradigm: Assessing the combined influence of practice and warnings in young and old adults. *Memory & Cognition*, 32, 135-141.
- Zaragoza, M. S., & Mitchell, K. J. (1996). Repeated exposure to suggestion and the creation of false memories. *Psychological Science*, 7, 294-300.

## REZIME

### **UTICAJ EGO-INVOLVIRANOSTI U STVARANJU LAŽNIH SEĆANJA IZ DETINJSTVA**

*Iris Žeželj, Sofija Pajić, Neda Omanović, Jasmina Ninković i Julija Grčić*

Odsek za psihologiju, Filozofski fakultet u Beogradu

Istraživanje je imalo za cilj proveru pretpostavke da je na uzorku ispitanika iz naše sredine moguće replicirati nalaze istraživanja Loftusove i saradnika (Loftus, 1995; 1997a; 1997b) u kojima su ispitanicima kreirana lažna sećanja na izmišljeni događaj iz detinjstva. Takođe, cilj je bio proveriti da li se kreirano lažno sećanje kvalitativno razlikuje od sećanja na stvarne događaje, kao i utvrditi da li uvođenje dodatne eksperimentalne manipulacije u vidu motivacione sugestije za podsticanje ego-involviranosti ima za posledicu povećanje sklonosti ispitanika da produkuju lažno sećanje. Autori su pošli od pretpostavke da će izloženost dodatnoj motivacionoj sugestiji (kratka pisana izjava o tome da je naučno dokazano da se inteligentniji ljudi više i življe sećaju događaja iz detinjstva) izazvati veću produkciju autobiografskih sećanja, učestalije kreiranje lažnih sećanja, veću uverenost ispitanika u ta sećanja, kao i veću jasnoću sećanja.

Istraživanje se sastojalo iz tri faze: (a) informacije o događajima iz detinjstva ispitanika prikupljene su od njihovih roditelja; (b) ispitanici su izloženi opisima ovih događaja, pri čemu je od njih zatraženo da daju određene informacije o događajima, kako bi bila procenjena jasnoća i sigurnost njihovih sećanja; (c) na kraju su ispitanicima prezentovani segmenti istih događaja i traženo da ih procene na istim skalama kao u prethodnoj fazi. Glavni uzorak činilo je 54 srednjoškolca iz Beograda, a u pretestu su učestvovali njihovi roditelji (N=54) koji su pružili inicijalne informacije o događajima iz detinjstva.

Dobijeni nalazi govore da je kod ispitanika iz naše sredine moguće kreirati lažna sećanja u procentu koji je očekivan i u skladu sa prethodnim nalazima (24%), kao i da se lažna sećanja kvalitativno razlikuju od stvarnih po procenjenoj sigurnosti i jasnoći. Motivaciona sugestija za podsticanje ego-involviranosti nije imala uticaja na sklonost ka kreiranju lažnih sećanja, na sigurnost u vlastita sećanja, kao ni na jasnoću sećanja. U trećoj fazi, retestu, 44.4% ispitanika prepoznalo je lažno sećanje kao autentično, što je znatno više nego u prethodnim istraživanjima. Do kreiranja lažnog sećanja kod ovako velikog broja ispitanika moglo je doći zbog primene lažnog događaja koji se pokazao kao visoko plauzibilan i adekvatno uvremenjen za populaciju naših ispitanika. Takođe, sklonost ka kreiranju lažnih sećanja mogla je

biti posledica određenih individualnih razlika, koje su dovele do povećanja individualne plauzibilnosti događaja kod pojedinih ispitanika. I sama istraživačka procedura mogla je podstaći ispitanike da u velikom broju kreiraju lažna sećanja: izloženi su pričama bliskih osoba koje važe za pouzdane izvore, zatim im je rečeno da se deca bolje od svojih roditelja sećaju događaja iz svog detinjstva i navođeni su da zamisljaju događaj kog nisu mogli da se sete. Lažni događaj predstavljen je kao deo stvarnog događaja što je verovatno kod ispitanika učvrstilo ideju o njegovoj verodostojnosti. Uslovi koji su doprineli stvaranju pogodne klime unapređeni su u trećoj fazi istraživanja (specifični detalji, bogatiji kontekst, konfuzija izvora), što je dovelo do povećanja broja ispitanika koji su kreirali lažno sećanje u odnosu na drugu fazu. Neefikasnost ego-involvirajuće sugestije može se objasniti nemogućnošću da se ispitanici dodatno motivišu, jer su oni već bili maksimalno motivisani u okviru osnovne eksperimentalne procedure i samog konteksta istraživanja. Moguće je, međutim, i da primenjena motivaciona sugestija nije bila adekvatna za ispitivanu populaciju ili da nije bila na dovoljno dobar način operacionalizovana.

Istraživanje predstavlja doprinos metodologiji istraživanja memorije i uticaja sugestije na prepoznavanje autobiografskih događaja jer, iako se u konkretnoj manipulaciji uticajem ego-involviranosti na proces kreiranja lažnih sećanja nije uspelo, rezultati ukazuju da je motivacija veoma značajna u procesu prisećanja i da prirodu te veze još treba detaljno ispitivati.

***Ključne reči:** memorija i motivacioni procesi, lažno sećanje, ego-involviranost, sugestibilnost*